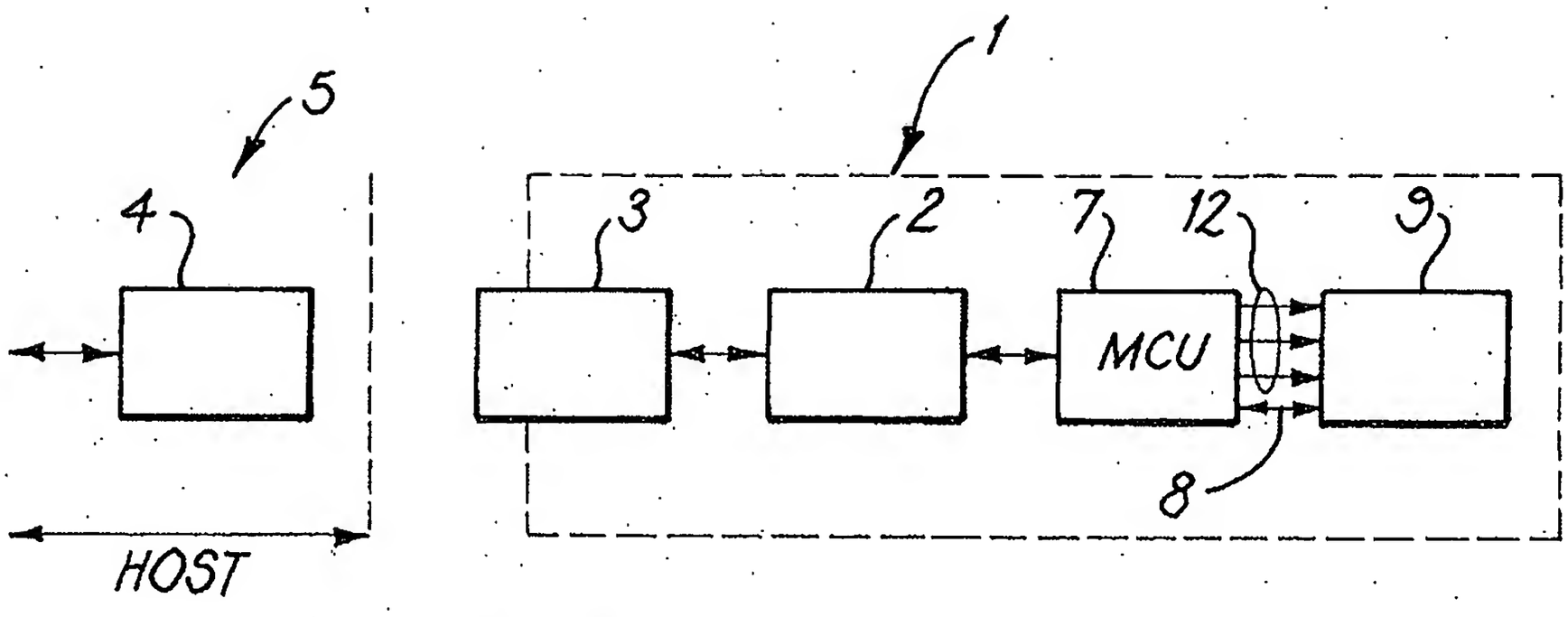

FIG. 1

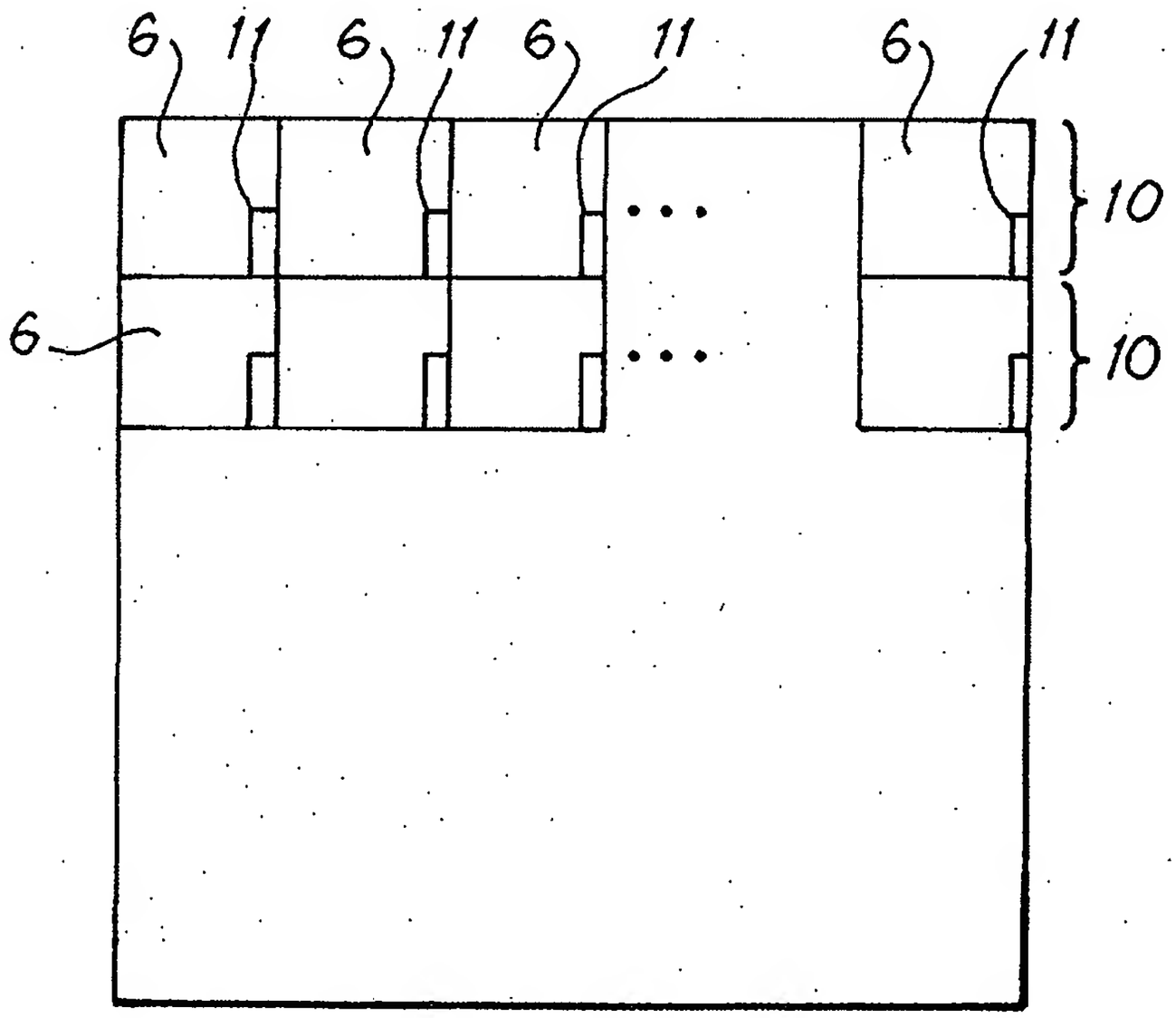

FIG. 2

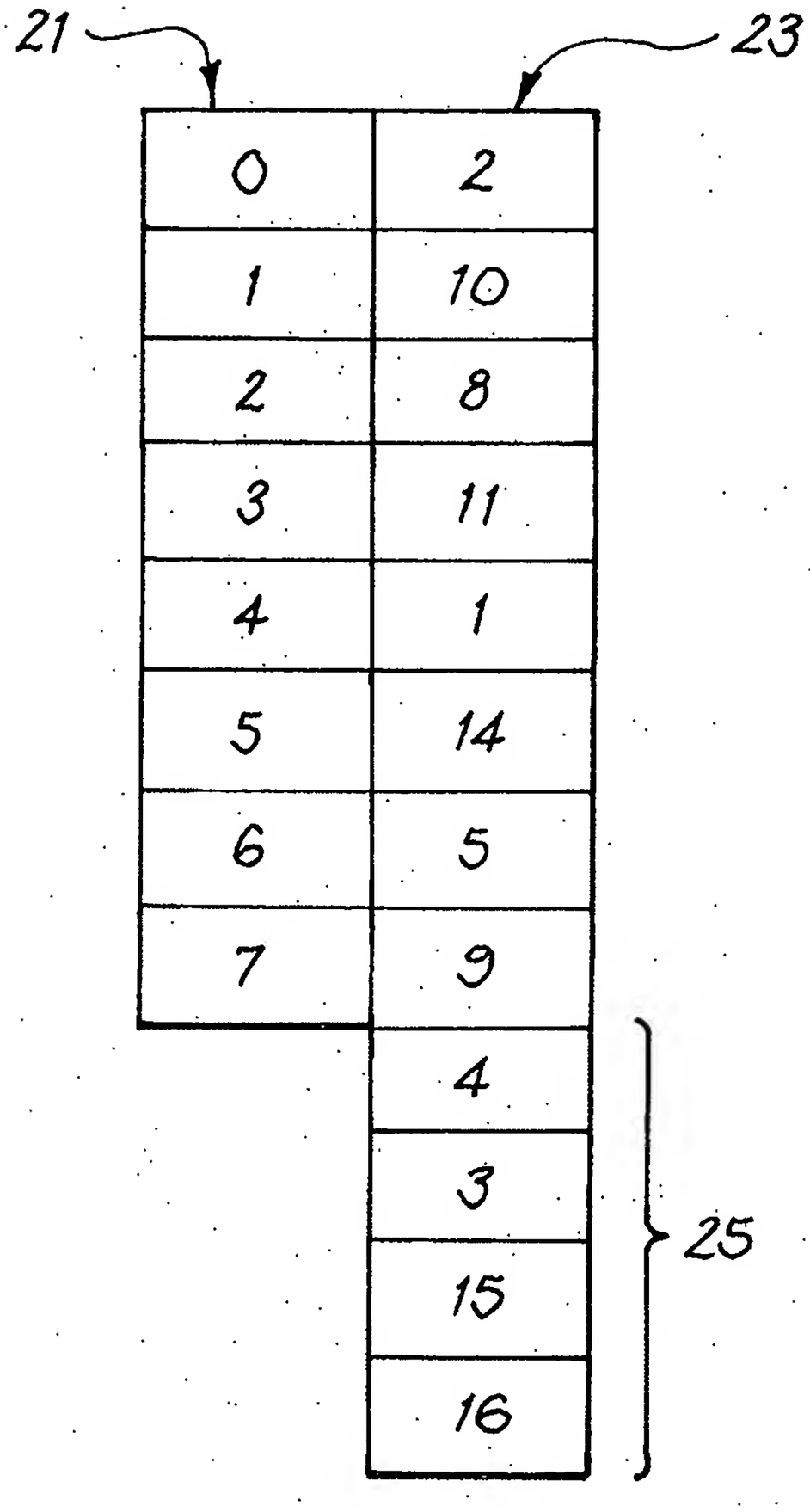

FIG. 3

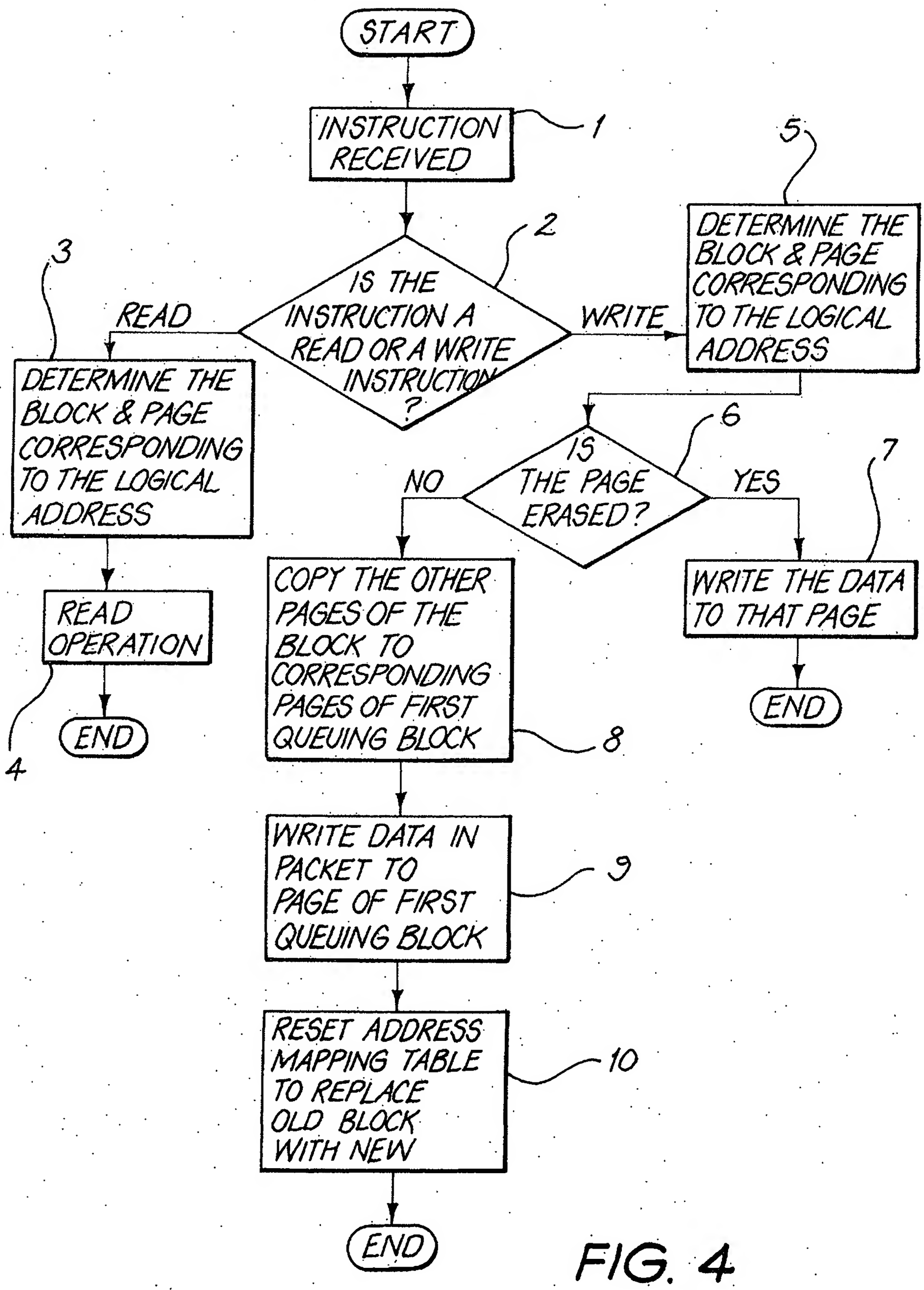
START
INSTRUCTION RECEIVED
1
IS THE INSTRUCTION A READ OR A WRITE INSTRUCTION ?
2
READ
WRITE
3
DETERMINE THE BLOCK & PAGE CORRESPONDING TO THE LOGICAL ADDRESS
READ OPERATION
END
4
5
DETERMINE THE BLOCK & PAGE CORRESPONDING TO THE LOGICAL ADDRESS
6
IS THE PAGE ERASED?
NO
YES
7
WRITE THE DATA TO THAT PAGE
END
COPY THE OTHER PAGES OF THE BLOCK TO CORRESPONDING PAGES OF FIRST QUEUING BLOCK
8
WRITE DATA IN PACKET TO PAGE OF FIRST QUEUING BLOCK
9
RESET ADDRESS MAPPING TABLE TO REPLACE OLD BLOCK WITH NEW
10
END

FIG. 4

0	2
1	4
2	8
3	11
4	1
5	14
6	5
7	9
	3
	15
	16
	10

25

FIG. 5

9
17
18
27

FIG. 6(a)

31	33	37	38
0	2		
1	8		
2	3	✓	0
3	9		
4	1		
5	6		
6	10		
7	11		
	7	✓	2
	4		
	5	✓	1
	12		

35

FIG. 6(b)

39

8	59	10	11
16	58	57	19
24	25	26	56

FIG. 6(c)

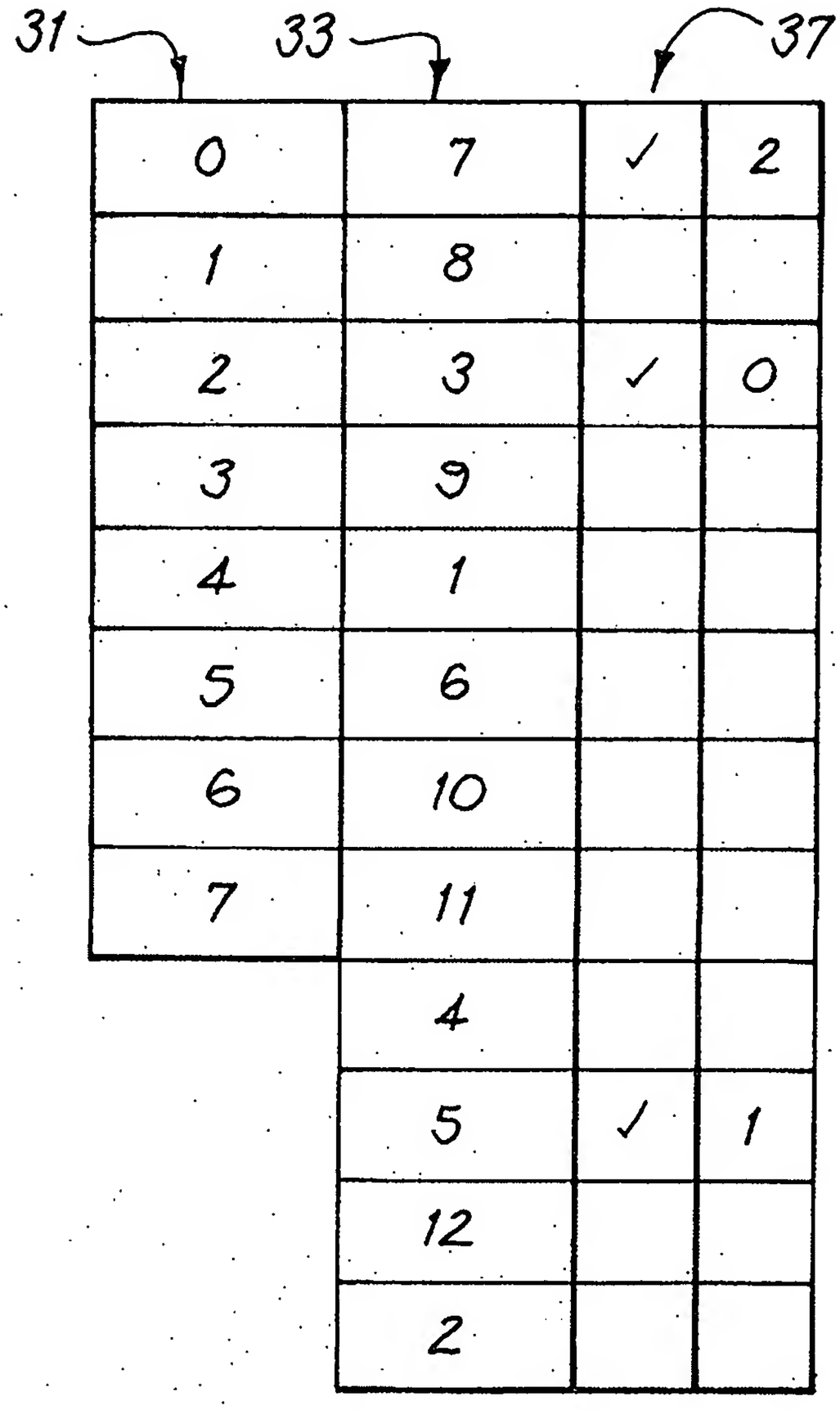
31
33
37
0 7 ✓ 2
1 8
2 3 ✓ 0
3 9
4 1
5 6
6 10
7 11
4
5 ✓ 1
12
2

FIG. 6(d)

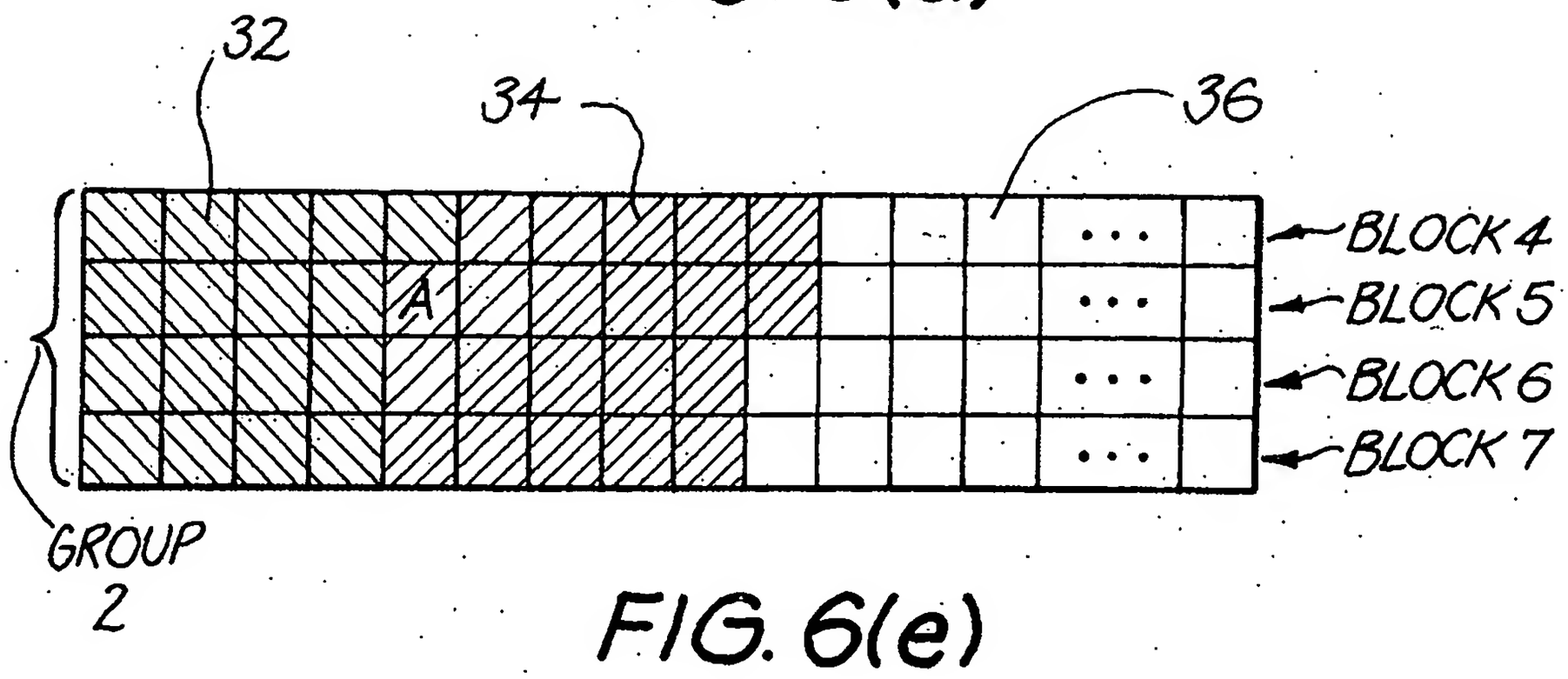
32
34
36
A
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7
GROUP 2

FIG. 6(e)

	0	1	2	3	4	5	6	7						63
BLOCK 0	X	X	X	X	Y	Z	Z	Z	0	0	0	0	...	0
BLOCK 1													...	
BLOCK 2													...	
BLOCK 3	0	0	0	0	0	0	0	0	0	0	0	0	...	0
BLOCK 4														

FIG. 7(a)

	0	1	2	3	4	5	6	7						63
BLOCK 0	0	0	0	0	0	0	0	0	0	0	0	0	...	0
BLOCK 1													...	
BLOCK 2													...	
BLOCK 3	X	X	X	X	A	Z	Z	Z	0	0	0	0	...	0
BLOCK 4														

FIG. 7(b)

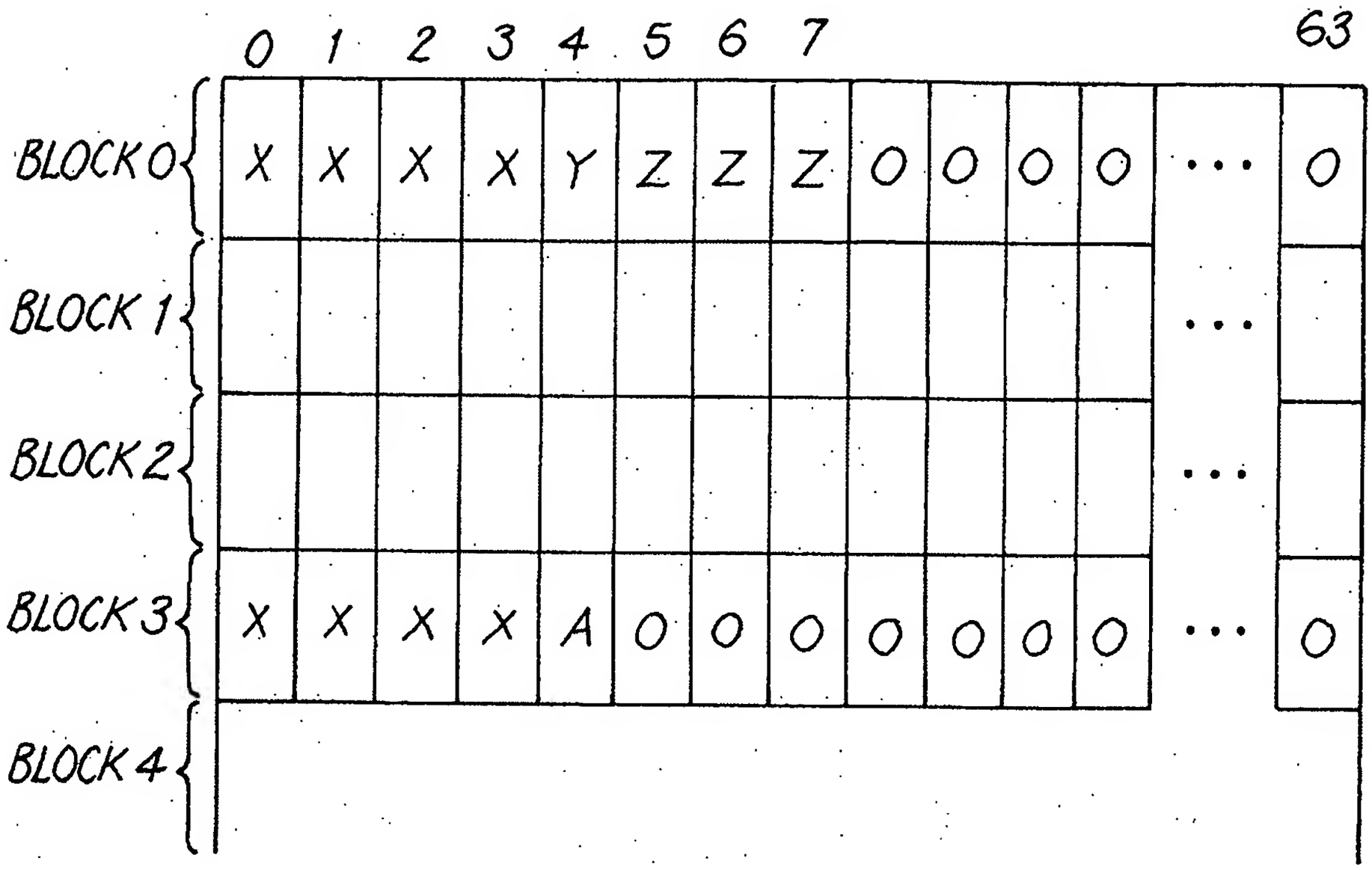
0 1 2 3 4 5 6 7 63
BLOCK 0
X X X X Y Z Z Z 0 0 0 0 ... 0
BLOCK 1
BLOCK 2
BLOCK 3
X X X X A 0 0 0 0 0 0 0 ... 0
BLOCK 4

FIG. 7(c)

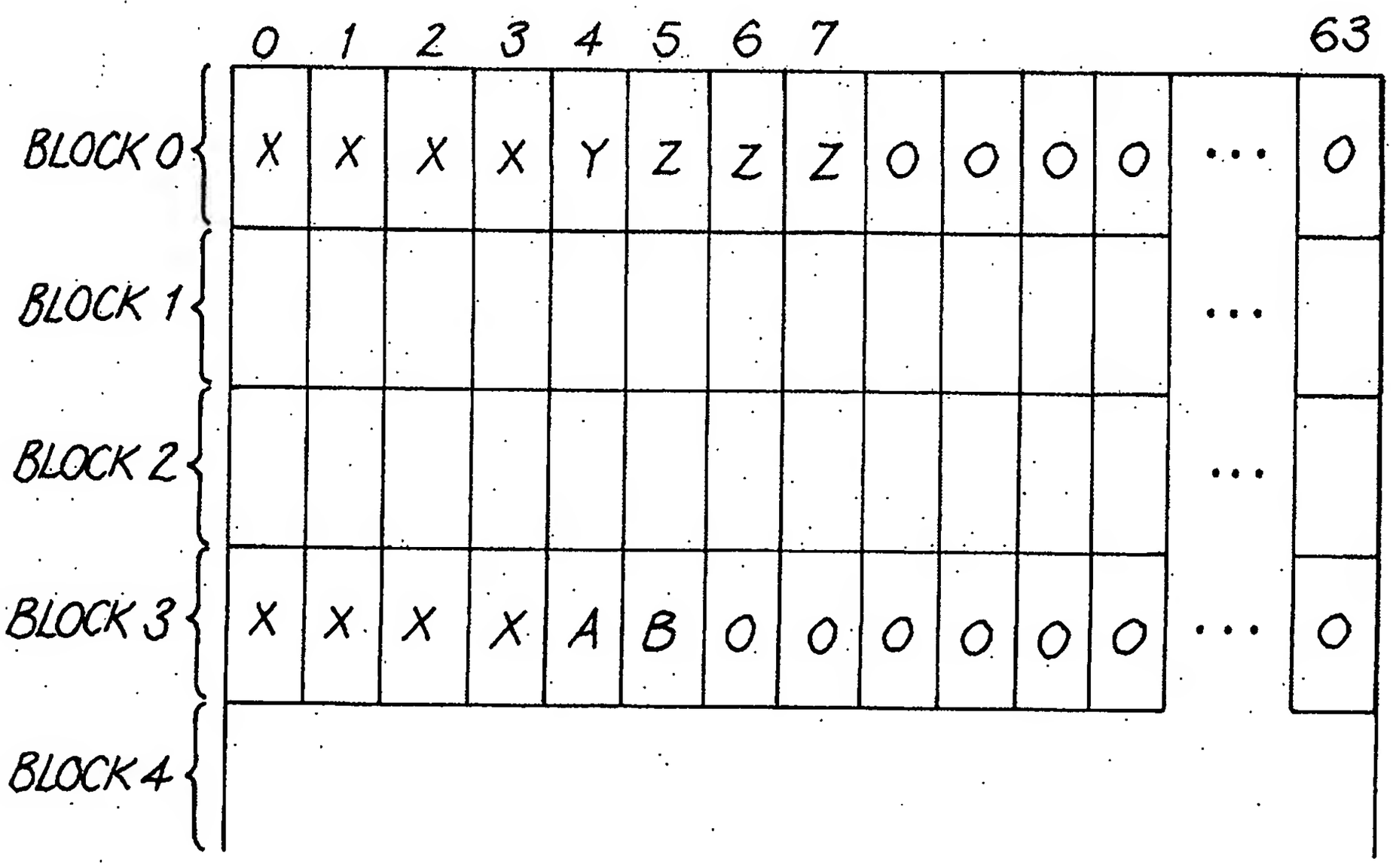
0 1 2 3 4 5 6 7 63
BLOCK 0
X X X X Y Z Z Z 0 0 0 0 ... 0
BLOCK 1
BLOCK 2
BLOCK 3
X X X X A B 0 0 0 0 0 0 ... 0
BLOCK 4

FIG. 7(d)

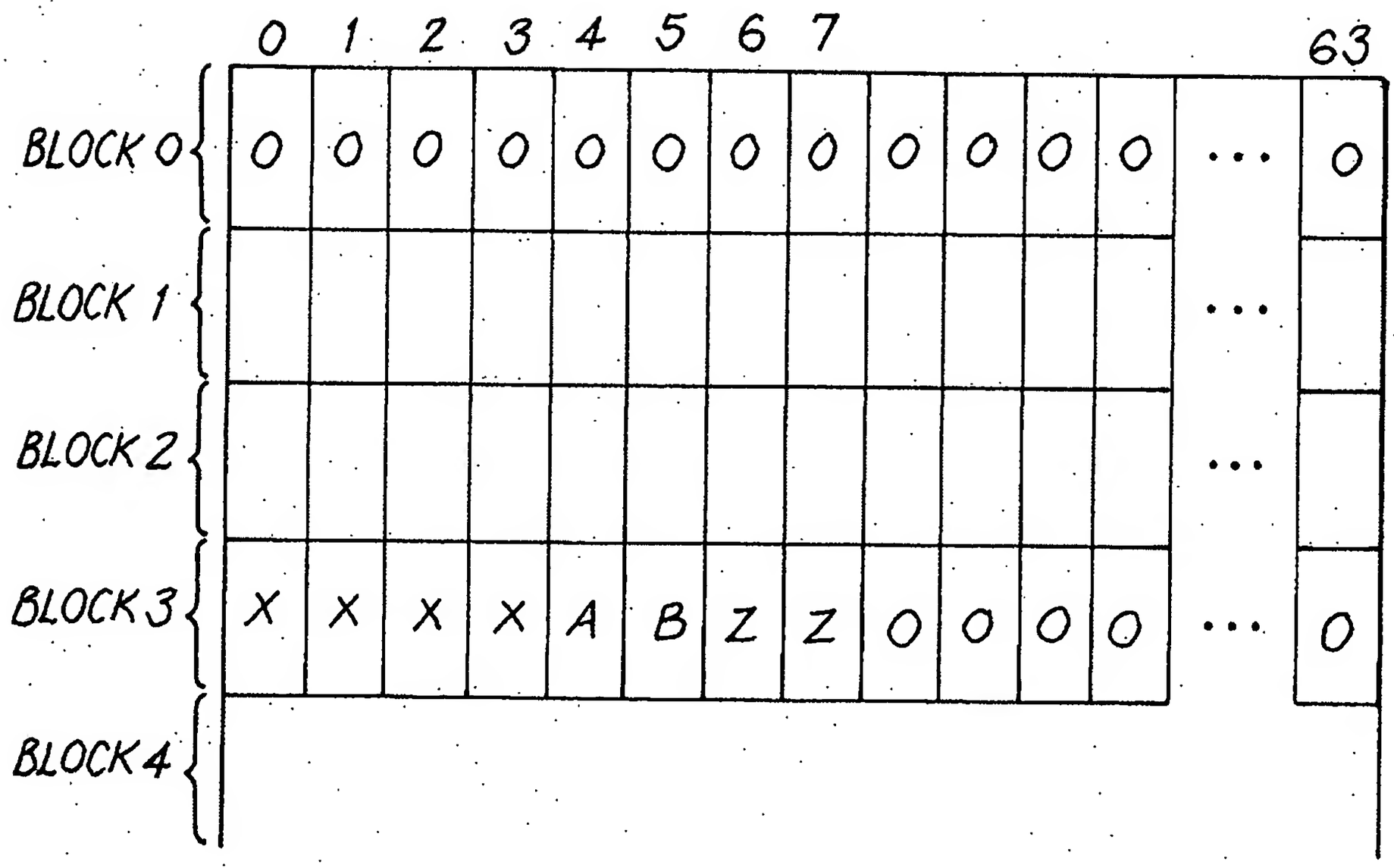
0 1 2 3 4 5 6 7 63
BLOCK 0
0 0 0 0 0 0 0 0 0 0 0 0 ... 0
BLOCK 1
...
BLOCK 2
...
BLOCK 3
X X X X A B Z Z 0 0 0 0 ... 0
BLOCK 4

FIG. 7(e)

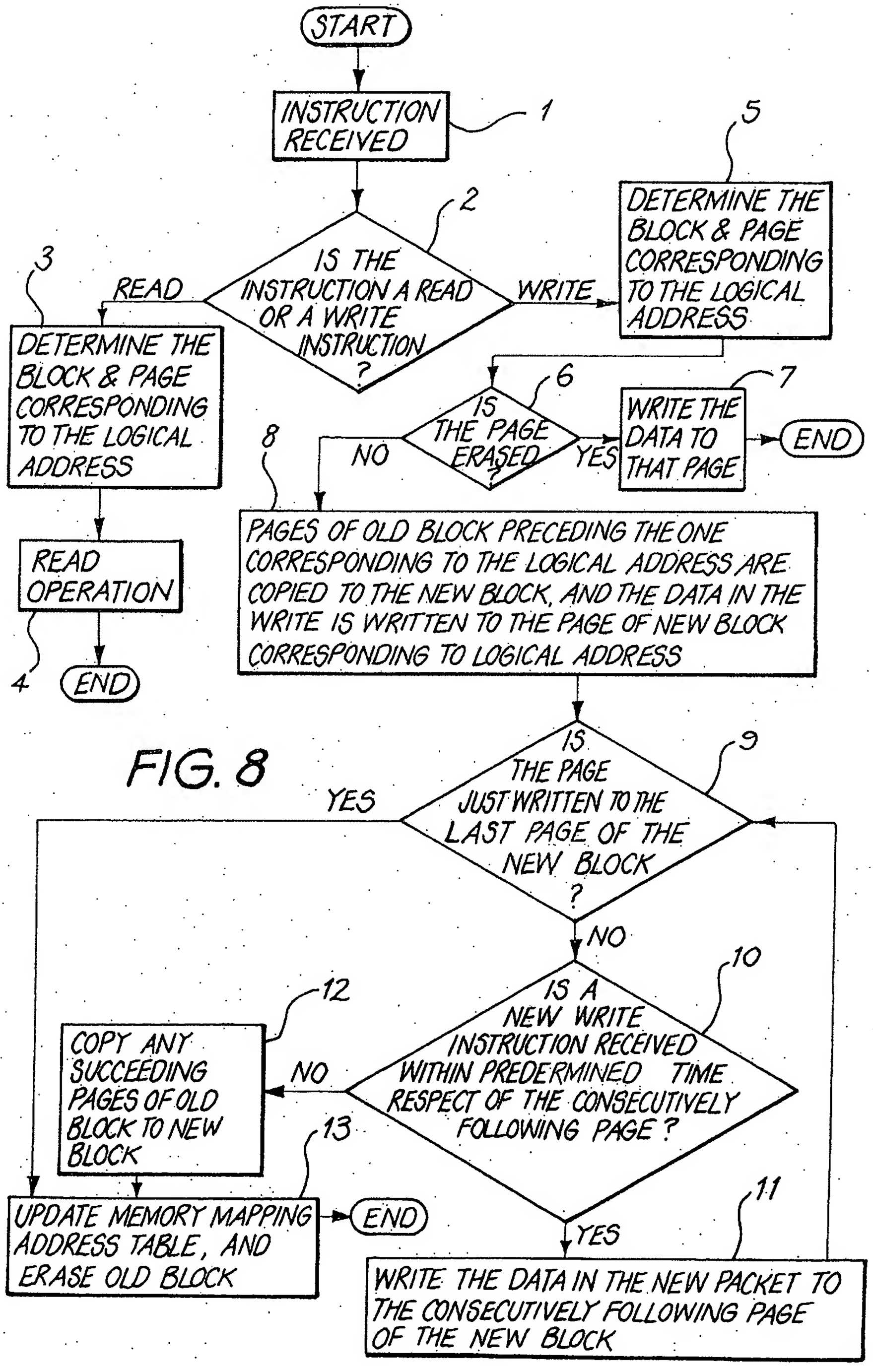
START
INSTRUCTION RECEIVED
1
2
IS THE INSTRUCTION A READ OR A WRITE INSTRUCTION ?
READ
WRITE
3
DETERMINE THE BLOCK & PAGE CORRESPONDING TO THE LOGICAL ADDRESS
5
DETERMINE THE BLOCK & PAGE CORRESPONDING TO THE LOGICAL ADDRESS
6
IS THE PAGE ERASED ?
NO
YES
7
WRITE THE DATA TO THAT PAGE
END
8
PAGES OF OLD BLOCK PRECEDING THE ONE CORRESPONDING TO THE LOGICAL ADDRESS ARE COPIED TO THE NEW BLOCK, AND THE DATA IN THE WRITE IS WRITTEN TO THE PAGE OF NEW BLOCK CORRESPONDING TO LOGICAL ADDRESS
READ OPERATION
4
END
9
IS THE PAGE JUST WRITTEN TO THE LAST PAGE OF THE NEW BLOCK ?
YES
NO
10
IS A NEW WRITE INSTRUCTION RECEIVED WITHIN PREDERMINED TIME RESPECT OF THE CONSECUTIVELY FOLLOWING PAGE ?
NO
12
COPY ANY SUCCEEDING PAGES OF OLD BLOCK TO NEW BLOCK
13
UPDATE MEMORY MAPPING ADDRESS TABLE, AND ERASE OLD BLOCK
END
YES
11
WRITE THE DATA IN THE NEW PACKET TO THE CONSECUTIVELY FOLLOWING PAGE OF THE NEW BLOCK

FIG. 8

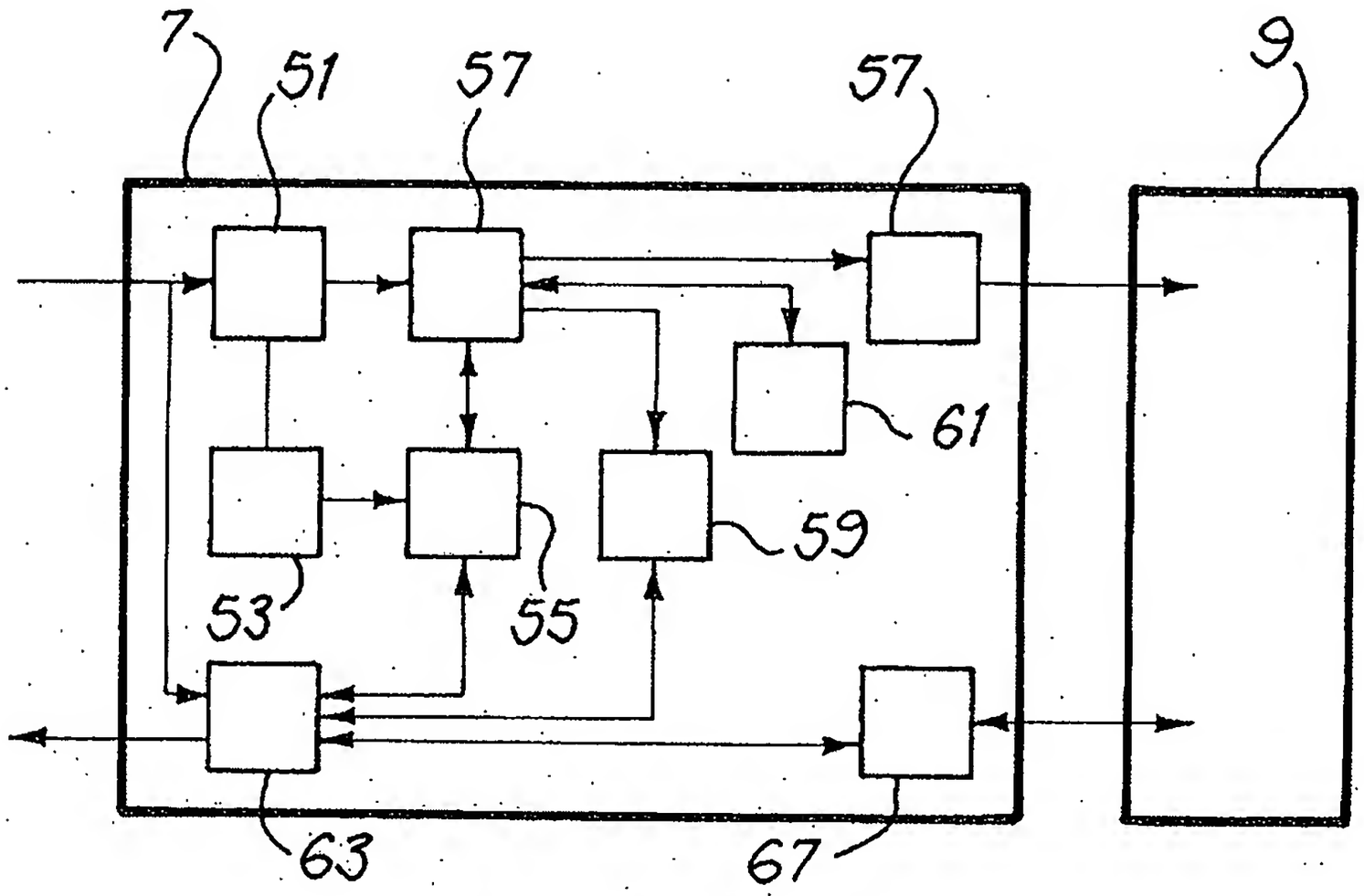

FIG. 9(a)

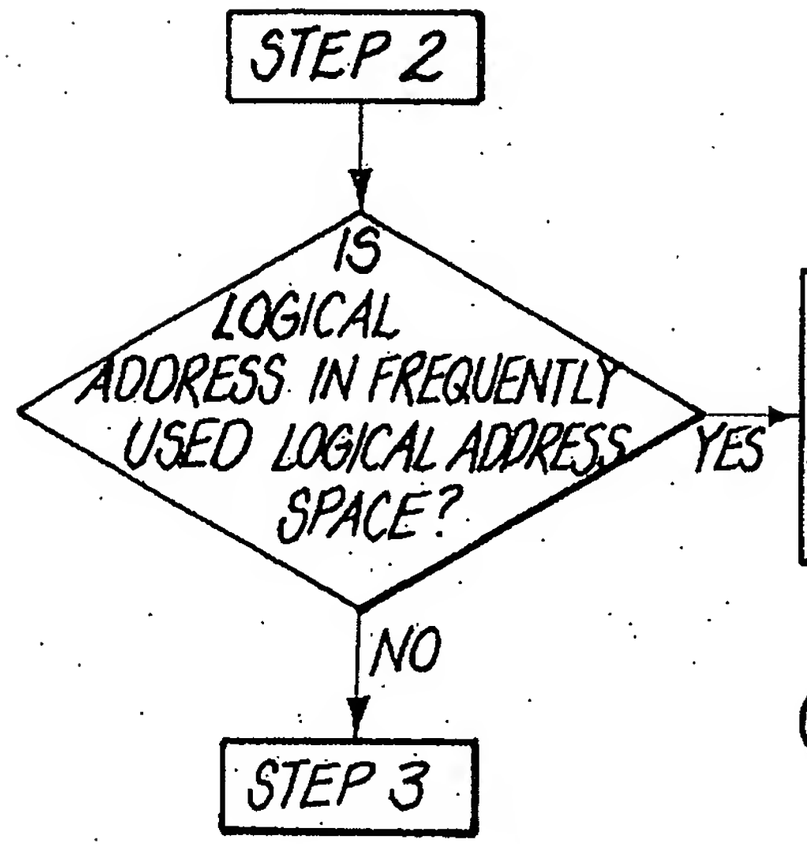

FIG. 9(b)

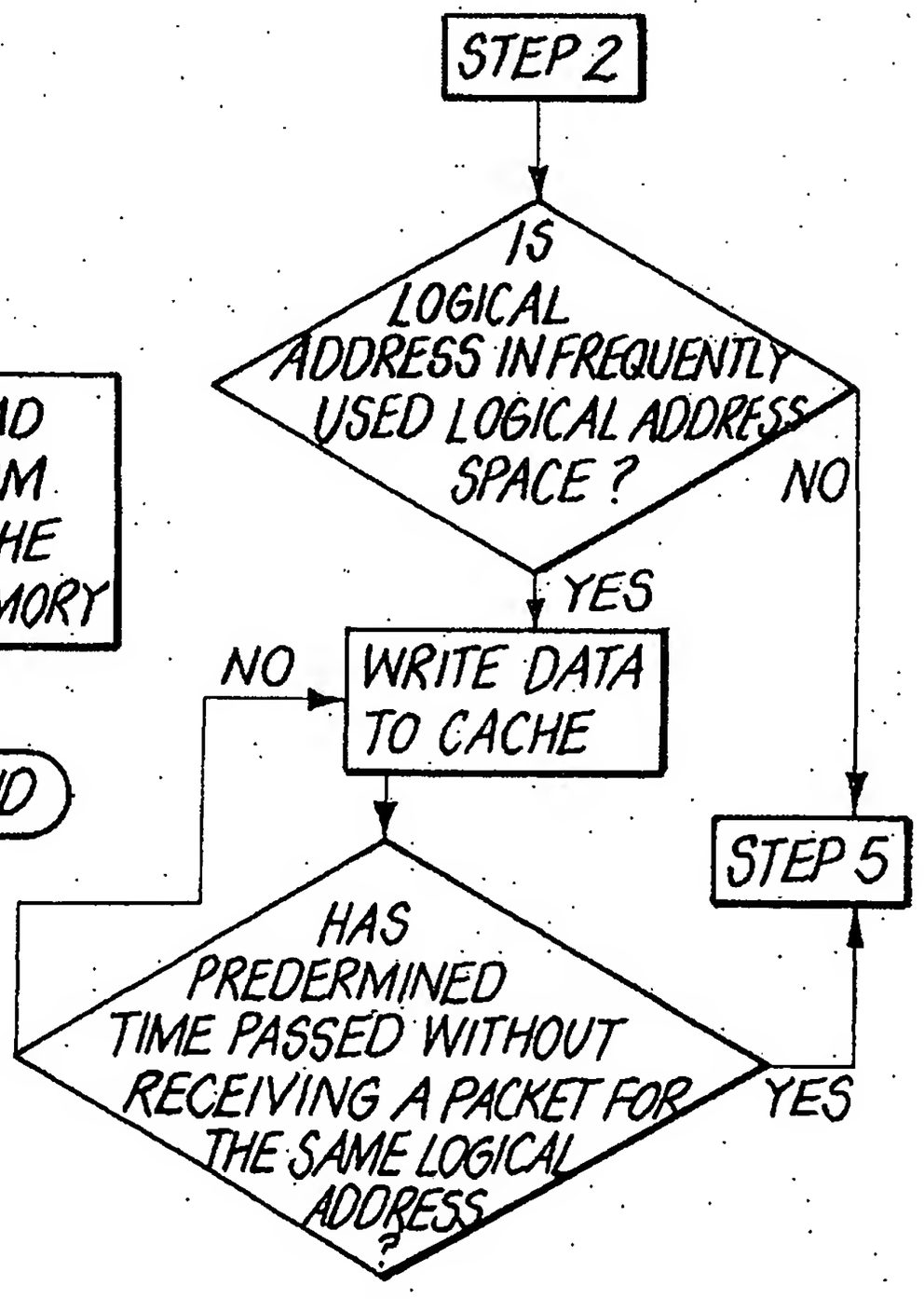

FIG. 9(c)